REMARKS

Claims 1-46 are pending in the application. Reconsideration of the application is requested in view of the amendments and the remarks to follow.

The Examiner is thanked for providing status ("acceptable") of the revised drawing (p 2, Office Action).

Art Rejections:

Claims 1-46 are stated (page 5) to be rejected under 35 U.S.C. 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,522,767 B1 to Moskowitz et al. (hereinafter "Moskowitz").

Anticipation is a legal term of art. Applicant notes that in order to provide a valid finding of anticipation, several conditions must be met: (i) the reference must include every element of the claim within the four corners of the reference (see MPEP §2121); (ii) the elements must be set forth as they are recited in the claim (see MPEP §2131); (iii) the teachings of the reference cannot be modified (see MPEP §706.02, stating that "No question of obviousness is present" in conjunction with anticipation); and (iv) the reference must enable the invention as recited in the claim (see MPEP §2121.01). Additionally, (v) these conditions must be simultaneously satisfied.

Applicant notes the requirements of MPEP §2131, which states that "TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT OF THE CLAIM." This MPEP section further states that "'A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.' *Verdegaal Bros.*

v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). 'The identical invention must be shown in as complete detail as is contained in the ... claim.' *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an ipsissimis verbis test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990)."

35 U.S.C. §102 and §103 are statutes reflecting rules of evidence relative to patent matters with respect to the legal concepts of "anticipation" and "unpatentability". To clarify the nature of the legal concept of "anticipation", Applicant notes the following language set forth in 35 U.S.C. §103(a):

> A patent may not be obtained though the invention is not **identically disclosed or described** as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This language sets forth Congressional intent in clear and exact terms as to what does or does not comprise anticipation, as compared to unpatentability. To support a valid finding of anticipation, the reference must contain, within its four corners, **exactly** the subject matter of the claim, as it appears in the claim.

In other words, the rebuttals contained in the Office Action on pages 3 and 4 are wide of the mark. These remarks indicate that "This description [from Moscowitz] will provide the backdrop for establishing truly optimized watermark-insertion including: use of nonlinear (chaotic) generators; error correction and data redundancy analysis to establish a system for optimizing key and watermark

message length; and more general issues regarding desired quality relating to the importance of subjecting watermarked content to different models when the content may be distributed or sold in a number of prerecorded media formats or transmitted via different electronic transmission systems ...." A reference that provides a "backdrop" does not anticipate a claim. Anticipation does not permit modification of the teachings of a reference, whether by suggestion or motivation, or by "picking and choosing" diverse elements from the reference and then re-arranging them to attempt to find the claimed subject matter.

Similarly, the remarks (p. 3, Office Action) that "All of these features **can** be incorporated into specialized digital signal processing microprocessors to apply watermarks to non-generalized computing devices, such as set-top boxes, video recorders that require time-stamping or authentication, digital video disc (DVD) machines and a multitude of other mechanisms that play or record copyrighted content." is an **admission, on the record,** that the reference does not anticipate the claimed subject matter.

The tests set forth in the Manual of Patent Examination Procedure, and summarized supra, for anticipation, set forth explicitly that the reference must disclose the claimed subject matter, in its entirety, as it is set forth in the claim, in order to find anticipation.

Likewise, the comments in the Office Action to the effect that "Thus, CPA allows implementation of digital watermarks, which are optimally suited to particular transmission, distribution, or storage mediums given nature of digitally sampled audio, video and other multimedia works. Watermark application parameters are adapted to individual characteristics of given sample stream.

As a result, CPA does implement a system in which identifying data **can** be securely and robustly included in a digitized signal such as audio and video signals such that the identifying data are not perceptible to a human viewer in a particular efficient matter." (emphasis added) are also **admissions, on the record**, that Moscowitz does not anticipate the claimed subject matter.

Additionally, the remarks in the Office Action at page 4, to the effect that: "Therefore, the examiner asserts that CPA does teach **or suggest** the subject matter broadly recited in independent claims 1, 7, 12, 14, 20, 25, 27, 33, 28 [sic], 40, and 44" indicates use of standards that are inappropriate to the legal concept of anticipation.

Moskowitz describes (Title) "Optimization methods for the insertion, protection, and detection of digital watermarks in digitized data". Moskowitz teaches a specific method for doing this wherein (Abstract) "The implementations of digital watermarks can be optimally suited to particular transmission, distribution and storage mediums given the nature of digitally-sampled audio, video and other multimedia works. Watermark application parameters can be adapted to the individual characteristics of a given digital sample stream. Watermark information can be either carried in individual samples or in relationships between multiple samples, such as in a waveform shape. More optimal models may be obtained to design watermark systems that are tamper-resistant given the number and breadth of existent digitized sample options with different frequency and time components. The highest quality of a given content signal may be maintained as it is mastered, with the watermark suitably hidden, taking into account usage of digital filters and error correction. The quality of the

underlying content signals can be used to identify and highlight advantageous locations for the insertion of digital watermarks. The watermark is integrated as closely as possible to the content signal, at a maximum level to force degradation of the content signal when attempts are made to remove the watermarks."

In contrast, claim 1 recites "A method for tracking a requested signal, the method comprising: receiving a request for the requested signal; generating transaction identification data which identifies the received request; and including a pattern in the requested signal to form a watermarked signal using a predetermined basis signal, wherein the transaction identification data can be derived from the pattern; further wherein the inclusion of the basis signal in the requested signal is designed to introduce no more than a predetermined maximum level of perceptibility to the requested signal", which is not taught or disclosed by Moskowitz.

Moskowitz provides no teaching at all of tracking a requested signal, of receiving a request for such a signal, of generating transaction identification data which identifies the received request or of a watermarked signal using a predetermined basis signal wherein the transaction identification data can be derived from the pattern, as recited in claim 1. Indeed, Moskowitz teaches (col. 18, line 40 et seq., that:

> The usefulness of this type of operation is demonstrated in the following scenario:
> People are interested in simply proving that their copyrighted sample was dubbed into another recording, not the specifics of ownership of the sample used in the dubbing. So, this implies that only a single, or limited number of watermark keys would be used to mark samples, and hence, the decode key candidates are limited, since the same key would be used to encode-simple copyright information which never varies from copy to copy.

The passages cited in the Office Action fail to provide the invention as recited in claim 1. Further, the above-noted passage clearly shows that the problems being addressed by Moskowitz are different than the issues being addressed by the present disclosure and embraced within the ambit of Applicant's claims. For at least these reasons, the anticipation rejection of claim 1 is prima facie defective and should be withdrawn, and claim 1 should be allowed.

Also in contrast, claim 7 recites "A method for enabling embedding of transaction-specific identification data into a requested signal, the method comprising: logically dividing the requested signal into segments; for each segment, embedding a first logical value in the segment to form a first embedded segment; embedding a second logical value in the segment to form a second embedded segment; and including both the first and second embedded segments in a composite signal", which is not taught or disclosed by Moskowitz.

The Office Action cites (p. 7, item 9) col. 4, lines 6-17 of Moskowitz relative to claim 7. The cited portion is reproduced below:

> The present invention additionally relates to a method of analyzing composite digitized signals for watermarks including obtaining a composite signal, obtaining an unwatermarked sample signal, time aligning the unwatermarked sample signal to the composite signal, gain adjusting the time aligned unwatermarked sample signal to the composite signal, estimating a pre-composite signal using the composite signal and the gain adjusted unwatermarked sample signal, estimating a watermarked sample signal by subtracting the estimated pre-composite signal for the composite signal, and scanning the estimated watermark sample signal for watermarks.

This passage is concerned with analysis of watermarked signals and is unrelated to a method for enabling embedding of transaction-specific identification data into a requested signal, as recited in claim 7. As such, it is impossible for this passage to teach or disclose logically dividing a requested

signal into segments or embedding first or second logical values into each segment, as recited in claim 7. For at least these reasons, the anticipation rejection of claim 7 is defective and should be withdrawn, and claim 7 should be allowed.

In further contrast, claim 12 recites "A method for embedding transaction-specific identification data into a requested signal, the method comprising: retrieving a composite signal which includes, for each of one or more corresponding portions of the requested signal, a first marked segment which represents a first logical value embedded in the corresponding portion of the requested signal and a second marked segment which represents a second logical value embedded in the corresponding portion of the requested signal; for each of the corresponding portions of the requested signal, selecting segments of the composite signal according to logical values of corresponding bits of the transaction-specific identification data; and combining the selected segments to form a watermarked signal which includes the transaction-specific identification data embedded therein", which is not taught or disclosed by Moskowitz.

The Office Action cites (pp. 8, 9, item 14) col. 1, lines 60-64; col. 2, lines 58-67; col. 3., lines 19-23; col. 12, lines 6-17; col. 16, lines 39-45; col. 17, lines 18-44 and col. 19, lines 57-61.

Col. 1, lines 60-64 of Moskowitz is reproduced below:

> Since the characteristics of digital recordings vary widely, it is a worthwhile goal to provide tools to describe an optimized envelope of parameters for inserting, protecting and detecting digital watermarks in a given digitized sample (audio, video, virtual reality, etc.) stream.

The preceding passage is extracted from the Background of Moskowitz. Col. 2, lines 58-67 of Moskowitz is reproduced below:

> The present invention additionally preserves quality of underlying content signals, while using methods for quantifying this quality to identify and highlight advantageous locations for the insertion of digital watermarks.

Col. 3, lines 19-23 of Moskowitz is reproduced below:

> The present invention also relates to a method for amplitude independent decoding of digital watermark information in a signal including steps of determining in the signal a sample window having a minimum and a maximum, determining a quantization interval of the sample window, normalizing the sample window to provide samples, and analyzing the quantization level of the samples to determine a message bit value.

The preceding two passages are extracted from the Summary of Moskowitz, i.e., are not logically related to the first passage noted above. Col. 12, lines 1-17 of Moskowitz is reproduced below:

> To establish more precise boundaries for determining the S/E, with root mean square (rms) quantization error E_{rms}, and assuming a uniform probability density function 1/Q (amplitude), the following describes the error:
>
> $E_{rms} = Q/(12)^{1/2}$
>
> Signal to quantization error is expressed as:
>
> $S/E=[S_{rms}/E_{rms}]^2 = 3/2(2^{2n})$
>
> Finally, in decibels (dB) and comparing 16-bit and 15-bit quantization:
>
> $S/E(dB)=10 \log[3/2(2^{2n})]=10 \log 3/2+2^{n \log 2}$
>
> (or "$=20 \log[(3/2)^{1/2}(2^n)]$")
>
> $=6.02n+1.76$

Col. 16, lines 39-47 of Moskowitz is reproduced below:

The mechanisms discussed above reach physical limits as the intent of signal filtering and error correction are ultimately determined to be effective by humans--decidedly analog creatures. All output devices are thus also analog for playback.

The present invention allows for a preprocessed and preanalyzed signal stream and watermark data to be computed to describe an optimized envelope for the insertion of digital watermarks and creation of a pseudo-random key, for a given digitized sample stream.

Col. 17, lines 18-44 of Moskowitz is reproduced below:

Taken to another level for digital watermarking, which is necessary for content that may be compressed and decompressed, forward adaptive allocation of bits and backward adaptive allocation provide for encoding signals into content signals in a manner such that information can be conveyed in the transmission of a given content signal that is subsequently decoded to convey the relatively same audible signal to a signal that carries all of its bits--e.g., no perceptual differences between two signals that differ in bit size. This coding technique must also be preanalyzed to determine the most likely sample bits, or signal components, that will exist in the smaller sized signal. This is also clearly a means to remove digital watermarks placed into LSBs, especially when they do not contribute theoretically perceptible value to the analyzed signal. Further methods for data reduction coding are similarly important for preanalyzing a given content signal prior to watermarking. Frequency domain coders such as subband and transform bands can achieve data reduction of ratios between 4:1 and 12:1. The coders adaptively quantize samples in each subband based on the masking threshold in that subband (See Pohlmann, Principles of Digital Audio). Transform coders, however, convert time domain samples into the frequency domain for accomplishing lossless compression. Hybrid coders combine both subband and transform coding, again with the ultimate goal of reducing the overall amount of data in a given content signal without loss of perceptible quality.

Col. 19, lines 51-65 of Moskowitz is reproduced below:

Again, this is a straightforward application of framework architecture which provides automated variance of algorithms to encode and decode a single watermark versus limitations evident in the analysis of a single random noise signal inserted over the entire

> content signal as proposed by Digimarc, NEC, Thorn EMI and IBM under the general guise of spread spectrum, embedded signaling schemes.
>
> It is important to note that the modular framework architecture, in which various modules including CODECs are linked to keys, provides a basic method by which the user can manually accomplish such algorithmic variations for independent watermarks. The main difference detailed above is that an automated method to accomplish this can be used within single watermarks.

Applicant finds no mention whatsoever in these passages of anything relating to: (i) any "method for embedding transaction-specific identification data into a requested signal", (ii) "retrieving a composite signal which includes", (iii) "a first marked segment which represents a first logical value embedded in the corresponding portion of the requested signal", (iv) "a second marked segment which represents a second logical value embedded in the corresponding portion of the requested signal", (v) "selecting segments of the composite signal according to logical values of corresponding bits of the transaction-specific identification data" (vi); "combining the selected segments to form a watermarked signal" or (vii) "which includes the transaction-specific identification data embedded therein", as recited in claim 12.

A pastiche or salmagundi of diverse bits and pieces of a reference cannot form a proper basis for an anticipation rejection. As such, these passages, alone or in any proper combination, fail to teach or disclose the subject matter of claim 12. For at least these reasons, the anticipation rejection of claim 12 is prima facie defective and should be withdrawn, and claim 12 should be allowed.

The Office Action cites (p. 9, item 16) col. 2, lines 26-46; col. 3, lines 19-23; col. 6, lines 42-52 relative to claim 14. Cols. 2 and 3 are portions of the Summary, while col. 6 is a portion of the Description of the Drawings; as such,

this salmagundi of disparate portions of Moskowitz fails to meet the requirements for a finding of anticipation set forth in MPEP §2131 (supra).

In contrast to the cited portions of Moskowitz, claim 14 recites "A computer-readable storage medium on which is stored computer code which, when executed by a computer, causes the computer to enable tracking a requested signal by: receiving a request for the requested signal; generating transaction identification data which identifies the received request; including a pattern in the requested signal to form a watermarked signal using a predetermined basis signal, wherein the transaction identification data can be derived from the pattern; further wherein the inclusion of the basis signal in the requested signal is designed to introduce no more than a predetermined maximum level of perceptibility to the requested signal", which is not taught or disclosed by Moskowitz. For at least these reasons, the anticipation rejection of claim 14 is prima facie defective and should be withdrawn, and claim 14 should be allowed.

The Office Action cites (p. 11, item 22) col. 3, line 59 through col. 4, line 17 of Moskowitz relative to the rejection of claim 20. As noted in the prior Response, these portions of Moskowitz are silent with respect to "embedding of transaction-specific identification data into a requested signal", as recited in claim 20. For at least these reasons, the anticipation rejection of claim 20 is prima facie defective and should be withdrawn, and claim 20 should be allowed.

The Office Action cites (pp. 12-13, item 27) extensive portions of Moskowitz, i.e., col. 1, lines 60-64; col. 2, lines 58-67; col. 3, lines 19-23; col. 4, lines 6-17 of Moskowitz as disclosing the subject matter of claim 25. Applicant respectfully notes that it is inapposite to cite various different portions of a

reference in attempting to reject the subject matter of a specific claim for reasons noted above.

As previously noted, these passages provide no mention whatsoever of "embedding transaction-specific identification data into a requested signal" or of "selecting segments of the composite signal according to logical values of corresponding bits of the transaction-specific identification data; and combining the selected segments to form a watermarked signal which includes the transaction-specific identification data embedded therein", as recited in claim 25. The passage at col. 4 is concerned with preanalysis of coding techniques and is not discernibly related to the subject matter of claim 25. Clarification of the rejection is **again** requested. For at least these reasons, the anticipation rejection of claim 25 is prima facie defective and should be withdrawn, and claim 25 should be allowed.

The Office Action cites (p. 13, item 29) col. 2, lines 26-46; col. 3, lines 19-23; col. 10, lines 62-67 and col. 11, lines 21-27 as providing the subject matter of claim 27. Applicant has already provided substantial evidence showing that Moskowitz is inapposite to, and does not anticipate, the subject matter of Applicant's disclosure or claims. More specifically, Moskowitz is not concerned with anything relating in any way to "transaction identification data which identifies the received request" or other related features as recited in claim 27. Again, clarification of the rejection and identification of relevant teachings is requested. For at least these reasons, the anticipation rejection of claim 27 is prima facie defective and should be withdrawn, and claim 27 should be allowed.

The Office Action cites (p. 15, item 35) col. 4, lines 6-17; col. 10, line 62 through col. 11, line 27, i.e., diverse bits and pieces of Moskowitz as providing the subject matter of claim 33. As noted above, Moskowitz is inapposite to, and does not anticipate, the subject matter of Applicant's disclosure or claims. More specifically, Moskowitz is not concerned with anything relating in any way to anything that "enables embedding of transaction-specific identification data into a requested signal" or any of the other subject matter recited in claim 33. For at least these reasons, the anticipation rejection of claim 33 is prima facie defective and should be withdrawn, and claim 33 should be allowed.

The Office Action variously cites (p. 17, item 40) col. 1, lines 60-64; col. 2, lines 58-67; col. 3, lines 19-23; col. 4, lines 6-17; col. 10, line 62 through col. 11, line 27; and col. 17, lines 18-44 in an effort to somehow derive anticipation of the subject matter of claim 38. As noted above, it is inappropriate to "mix and match" various portions of a reference in an effort to determine anticipation, and, as also noted above, Moskowitz is not concerned with anything relating in any way to anything that "enables embedding of transaction-specific identification data into a requested signal" or any of the other subject matter recited in claim 38. For at least these reasons, the anticipation rejection of claim 38 is prima facie defective and should be withdrawn, and claim 38 should be allowed.

The Office Action cites (p. 18, item 42) a salmagundi of "bits and pieces" of Moskowitz, viz., col. 3, lines 50-59 and 59-67 and col. 4, lines 1-17 thereof.

Applicant is unable to discern any logical relationship whatsoever between, e.g., "generating and quantizing a local noise signal", "dithering watermark quantizations", "considering an original watermark synchronization marker",

"decoding watermarks by considering an original watermark synchronization marker", "encoding and decoding watermarks in a signal using a spread spectrum technique", "analyzing composite digitized signals for watermarks including obtaining a composite signal, obtaining an unwatermarked sample signal" etc. that has any discernible relationship to the subject matter recited in claim 40. Clarification of the rejection and of any perceived relationship between the recited subject matter and the cited portions of the reference is requested. For at least these reasons, the anticipation rejection of claim 40 is prima facie defective and should be withdrawn, and claim 40 should be allowed.

Conclusion

Claims 1-46 are in condition for allowance. Applicant respectfully requests reconsideration and issuance of the subject application. Should any matter in this case remain unresolved, the undersigned attorney respectfully requests a telephone conference with the Examiner to resolve any such outstanding matter.

Respectfully Submitted,

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By: _____

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